UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/591,245	06/09/2000	Jung-Gi Kim	P2008	3212

33942	7590	07/23/2004	

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EXAMINER
CHOUDHARY, ANITA

ART UNIT	PAPER NUMBER
2153	

DATE MAILED: 07/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 May 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,7,8,11-16,18 and 25* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,7,8,11-16,18 and 25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

The amendment filed on May 6, 2004 has been entered. Claims 1, 7, 8, 11, 14, and 18

have been amended and are presented for further examination. Claims 5, 6, 9, 10, 17 and 19-24

has been cancelled. However, claims 3 and 15 have been improperly re-instated.

Claims 1-4, 7, 8, 11-16, 18 and 25 are presented.

Claim Objections

The amendment to the claims filed on May 6, 2004 does not comply with the

requirements of 37 CFR 1.121(c) subsection 5 because Claims 3 and 15 have been improperly

reinstated (see number 5 below). Amendments to the claims filed on or after July 30, 2003 must

comply with 37 CFR 1.121(c) subsection 5 which states:

> (5) *Reinstatement of previously canceled claim.* A claim which was previously
canceled may be reinstated only by adding the claim as a "new" claim with a new claim number.

Applicant is advised to renumber claims 3 and 15 to new claims 26 and 27, respectively.

Response to Arguments

Applicant's arguments with respect to claims 1, 8, and 14 have been considered but are

moot in view of the new ground(s) of rejection.

In regarding claims 3 and 15, Nelson et al. is still relied upon to teach claim limitations.

Refer to Arguments from Office Action sent February 5, 2004.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Totani

(US 5,603,056) in view of Nelson et al. (US 6,526,092).

Totani shows a method for updating existing control program or rewrite program with a

new control program or rewrite program. When new program from host computer is to be

loaded onto flash EEPROM the rewrite program is first copied on to RAM. The RAM receives

and stores the new control program from the host and thereafter it is loaded on to flash

EEPROM. In accordance Totani show:

A host computer (7) supplying new control program files (col. 2 line 56-58),

A flash memory disposed in the firmware board for storing a production-processing

program (e.g. rewrite program) (fig. 3, col. 3 lines 64- col. 4 line 4),

A personal computer (PC) (e.g. CPU) for receiving the production file (e.g. control

program) downloaded from the host computer and for storing the downloaded file in a

corresponding region of the flash memory (col. 3 lines 64-67, col. 4 lines 30-33).

A RAM (3) for storing a copy of the production-processing program (rewrite program)

from the flash memory when upgrading the production-processing program so that the upgrading

can be performed in the RAM (col. 5 lines 22-38, and col. 6 lines 25-37);

Wherein the PC stores the production files in the flash memory using the production-processing program in the flash memory (col. 5 lines 34-38, col. 6 lines 35-36).

Although Totani shows substantial features of the claimed invention, Totani silent as to a host computer *converting an execution file prepared by an operator into a file for production.* Nonetheless this feature is well known in the art, and would have been an obvious modification to the system disclosed by Totani, as evidenced by Nelson.

In an analogous art, Nelson shows a system for downloading new firmware program files from remote PC. Nelson shows a host computer converting an execution file prepared by an operator into a file for production (col. 15 lines 24-37).

Given this feature, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system shown by Totani to employ the feature shown by Nelson, in order to format fields in each packet so they can be acknowledged and received in a proper order (see Nelson col. 42-46).

Although the combined teachings of Totani in view of Nelson show substantial features of the claimed invention, as discussed above, they do not explicitly show a Dynamic RAM (DRAM). Nonetheless, a person having ordinary skill in the art would have readily recognized the advantages and desirability of modifying Totani in view of Nelson by including the limitation of (1) Dynamic RAM and (2) Static RAM in order to:

(1) allow for the system to hold more data than when using RAM and to reduce system cost; and

(2) improve the systems efficiency by increasing speed and reducing power consumption.

In considering claim 2, Nelson discloses comprising an RS232C line for connecting the PC to the firmware board (Fig. 2, "215").

In referring to claim 3, Nelson shows the host computer, prior to creation of the file for production, attaches information relating to a storage address of the flash memory, a compression state (record type), and a booting state (checksum) for the production file (column 8, lines 23-31, col. 9 line 35-65, col. 11 lines 1-23, col. 13 line 53- 59).

In referring to claim 4, Totani shows PC transmits the production file to the flash memory when a transmission command is inputted thereto (col. 6 lines 29-35).

In referring to claim 7, Totani shows wherein the upgraded production-processing program is the RAM is transferred back to the flash memory (col. 5 lines 36-38).

Claims 8, 11-13, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al (US 6,209,127) in view of Nelson et al. (US 6,526,092).

Mori shows a system for upgrading loader programs to terminal device having a first memory and a second memory, wherein upgraded files are downloaded to the terminal device and staged at second memory before downloaded to first target memory bank (see col. 3 lines 25-49). Mori shows,

A host computer system for supplying updated software modules (col. 5 lines 3-8).

At least one personal computer (10) coupled to said host computer for receiving said new firmware downloaded from said host computer (col. 6 lines 41-44)'

A firmware board having: a communication interface (Memory Management Unit 8) means connected for communicating with said personal computer and for transferring data between said personal computer and said firmware board (col. 8 lines 46-55).

A first memory means coupled to said communications means for storing a boot program, operating codes, and said OS firmware (EEPROM banks, fig, 5a, 5b, col. 7 lines 8-20 and 51-67).

A second memory (band data copy RAM, 14) means coupled to said first memory means for storing copy of information stored in said first memory means to be replaced with said updated firmware (fig. 15B, col. 13 lines 60-65).

Wherein said personal computer is further operable for storing said updated firmware downloaded from said host computer in a corresponding region of said first memory means (col. 13 lines 57-60),

Wherein the replaced updated firmware in said second memory means is transferred back to the corresponding region of said first memory (fig. 15c, col. 14 liens 3-10).

Although Mori shows substantial features of the claimed invention, Mori silent as to a host computer *converting an execution file prepared by an operator into a file for production.* Nonetheless this feature is well known in the art, and would have been an obvious modification to the system disclosed by Mori, as evidenced by Nelson.

In an analogous art, Nelson shows a system for downloading new firmware program files from remote PC. Nelson shows a host computer converting an execution file prepared by an operator into a file for production (col. 15 lines 24-37).

Given this feature, a person of ordinary skill in the art would have readily recognized the

desirability and advantages of modifying the system shown by Mori to employ the feature shown

by Nelson, in order to format fields in each packet so they can be acknowledged and received in

a proper order (see Nelson col. 42-46).

In referring to claim 11, Mori shows second memory means comprises dynamic random

access memory of static random access memory (col. 6 lines 55-58).

In considering claim 12, Nelson discloses wherein said first memory means comprises a

flash memory (Fig. 2, "217"), and wherein said communication means comprises a RS232C line

(Fig. 2, "215").

In referring to claim 13, Mori shows host computer is further operable for attaching

storage address information of said first memory means to said updated firmware (fig. 4b, col. 7

lines 27-37).

In referring to claim 25, Mori shows replacing said copy of information with said updated

firmware (fig. 15c, col. 14 lines 3-10).

Claims 14-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Garfunkel et al. (US 6,615,404) in view of Nelson et al. (US 6,526,092).

Garfunkel shows a system for updating flash memory that is linked to a RAM that

functions according to the operating software in the flash memory. Garfunkel shows:

Providing a flash memory in a firmware board for storing production-processing program

Receiving software, by personal computer (10), downloaded from host computer (col. 5

line 2-6).

Storing the production file in the corresponding region (21) of the flash memory (fig. 2, col. 5 lines 64-67, col. 7 lines 20-22).

Wherein the method further comprises the step of duplicating the production-processing program in an externally connected RAM while upgrading the production-processing program in the RAM (col. 7 lines 22-32, Note that the duplicated program is the upgraded program being saved into RAM, therefore upgrade is performed to RAM as well).

Although Garfunkel shows substantial features of the claimed invention, Garfunkel silent as to a host computer *converting an execution file prepared by an operator into a file for production*. Nonetheless this feature is well known in the art, and would have been an obvious modification to the system disclosed by Garfunkel, as evidenced by Nelson.

In an analogous art, Nelson shows a system for downloading new firmware program files from remote PC. Nelson shows a host computer converting an execution file prepared by an operator into a file for production (col. 15 lines 24-37).

Given this feature, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system shown by Garfunkel to employ the feature shown by Nelson, in order to format fields in each packet so they can be acknowledged and received in a proper order (see Nelson col. 42-46).

In referring to claim 15, Nelson shows the host computer, prior to creation of the file for production, attaches information relating to a storage address of the flash memory, a compression state (record type), and a booting state (checksum) for the production file (column 8, lines 23-31, col. 9 line 35-65, col. 11 lines 1-23, col. 13 line 53- 59).

In referring to claim 16, Garfunkel shows PC transmits the file for production to the flash

memory when a transmission command is inputted thereto (col. 5 lines 8-11).

In referring to claim 18, although Garfunkel in view of Nelson show substantial features

of the claimed invention, as discussed above, they do not explicitly show a Dynamic RAM

(DRAM) and SRAM. Nonetheless, a person having ordinary skill in the art would have readily

recognized the advantages and desirability of modifying Garfunkel in view of Nelson by

including the limitation of (1) Dynamic RAM and (2) Static RAM in order to:

(1) allow for the system to hold more data than when using RAM and to reduce system

cost; and

(2) improve the systems efficiency by increasing speed and reducing power consumption.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anita Choudhary whose telephone number is (703) 305-5268. The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (703) 305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AC
July 16, 2004

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